



## U.S. Environmental Protection Agency

# Natural Resource Damages

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## Ecological Risk Assessment and Natural Resource Damage Assessment



The intent of this web page is to provide detailed information regarding [Ecological Risk Assessments \(ERAs\)](#) and [Natural Resource Damage Assessments \(NRDAs\)](#) to Trustees and EPA staff, respectively. EPA recommends an ERA as part of its process for assessing the impacts of site-related contamination.

ERAs evaluate the likelihood that adverse ecological effects are occurring or may occur as a result of exposure to physical (e.g., site cleanup activities) or chemical (e.g., release of hazardous substances) stressors at a site. These assessments often contain detailed information regarding the interaction of these "stressors" with the biological community at the site. Part of the assessment process includes creating exposure profiles which: describe the sources and distribution of harmful entities; identify sensitive organisms or populations; characterize potential exposure pathways; and estimate the intensity and extent of exposures at a site. ERAs are usually conducted during the Remedial Investigation/Feasibility Study (RI/FS) phase of the [Superfund response process](#). ERAs can be conducted quickly for removal actions, should there be an eminent threat to ecological receptors. However, these instances are rare and these ERAs follow the same process outlined for long-term ERAs conducted during the RI/FS.

Ecological risk information may be relevant in an NRDA and both EPA and [Natural Resource Trustees](#) should benefit from sharing information and coordinating during ERAs. In October 1999 the Agency recently released [Ecological Risk Assessment and Risk Management Principles for Superfund Sites](#) (OSWER Directive 9285.7-28 P). This guidance directs Superfund site risk managers and [Natural Resource Trustees](#) to coordinate both EPA investigations of risk and Trustee investigations of resource injuries to make efficient use of Federal and State funds.

An NRDA is used to identify additional actions, beyond the response needed, to address injuries to natural resources. Examples include actions needed to restore the productivity of habitats or the species diversity that were injured by the past releases or to replace them with substitute resources. A Trustee may also seek compensation for the loss of injured natural resources from the time of injury until the time they are fully restored by assessing lost services. Regulations for assessing NRD have been promulgated under both CERCLA and OPA.

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